

13

an imaging panel that produces virtual images;
 illumination optics configured to provide illumination
 light to the imaging panel from a source using a MEMS
 (micro-electro mechanical system) device operating to
 raster scan illumination light onto the imaging panel;
 a combiner comprising one of numerical aperture (NA)
 converter or exit pupil expander (EPE); and
 imaging optics configured to couple image light from the
 imaging panel into the combiner, wherein illumination
 light propagates on a path along the chain of the optical
 elements comprising the illumination optics, the imag-
 ing panel, imaging optics, and combiner in series, such
 that the combiner is last in the series to thereby display
 images on the user's eye.

8. The HMD device of claim 7 wherein the imaging panel
 operates in one of transmission or reflection.

9. The HMD device of claim 7 wherein the imaging optics
 include one of birdbath imaging optics or direct eyepiece
 optics.

10. The HMD device of claim 7 wherein the MEMS
 device is operated to provide raster scanning through a fast
 axis and a slow axis.

11. The HMD device of claim 7 wherein the EPE com-
 prises waveguide-based display comprising one or more
 diffractive optical elements (DOEs) configured for in-cou-
 pling light from the imaging panel, expanding an exit pupil
 of the image light, and out-coupling the image light from the
 display with expanded exit pupil.

12. The HMD device of claim 7 in which the imaging
 optics further comprise magnifying or collimating optics to
 provide increased exit pupil and field of view of the dis-
 played images.

13. A device configured to control image light associated
 with virtual images within a field of view (FOV), compris-
 ing:

14

an imager configured to generate the virtual images;
 a waveguide including an in-coupling diffractive optical
 element (DOE) configured to in-couple virtual image
 light into the waveguide, at least one intermediate DOE
 configured to expand an exit pupil of the image light in
 a first direction of the FOV, and an out-coupling DOE
 configured to expand the exit pupil of the image light
 in a second direction of the FOV and further configured
 to out-couple image light out of the waveguide to an
 eye of a user of the device; and

a MEMS (micro-electro mechanical system) scanner con-
 figured to perform raster scanning of illumination light
 from an illumination light source to illuminate the
 imager to thereby generate the virtual image light.

14. The device of claim 13 further comprising birdbath
 imaging optics comprising one or more of fold mirror or
 polarization beam splitter and one or more lenses configured
 for magnifying or collimating the virtual image light.

15. The device of claim 13 in which the imager is a
 micro-display.

16. The device of claim 13 in which the illumination light
 source is a laser.

17. The device of claim 13 in which the virtual images are
 color images using different colors, and the MEMS scanner
 is operated to modulate per-color intensity.

18. The device of claim 17 in which the imager is operated
 using an RGB (red, green, blue) color model.

19. The device of claim 13 in which the waveguide is
 configured as a near-eye display.

20. The device of claim 13 in which the MEMS scanner
 and imager are operated as a pico projector.

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